

The Montana American Indian  
Behavioral Risk Factor Surveillance System Survey  
Results About Commercial Tobacco  
2001, 2003, and 2005

December, 2006

Montana Cardiovascular Health Program

Montana Diabetes Project

Montana Tobacco Use Prevention Program

Montana Department of Health and Human Services



# The Montana American Indian Behavioral Risk Factor Surveillance System Survey Results About Commercial Tobacco 2001, 2003, and 2005

December, 2006

Sponsored by  
Montana Cardiovascular Health Program  
Montana Diabetes Project  
Montana Department of Public Health and Human Services

Survey conducted by  
Northwest Resource Consultants  
2021 Eleventh Avenue, Suite 16  
Helena, MT 59601

Analysis by  
Montana Tobacco Use Prevention Program  
Montana Department of Public Health and Human Services



**Highlights of  
The Montana American Indian  
Behavioral risk Factor Surveillance System Survey  
Results About Commercial Tobacco  
2001, 2003, and 2005**

**More than one third of American Indian participants in the survey were current smokers.**

- Smoking was more common among women than men.
- Smoking was more common among respondents younger than age 45.

**Nearly one quarter of American Indian men under age 45 were current spit tobacco users, and 13% of all American Indian men were current spit tobacco users.**

**Many American Indian tobacco users want to quit.**

- More than half of all current smokers had tried to quit in the year before the survey and two thirds were considering quitting in the next six months.
- Nearly half of men who used spit tobacco had tried to quit in the year before the survey and nearly three quarters were considering quitting in the next six months.

**Participants did not report strong support from health care providers for tobacco cessation.**

- Fewer than half of current smokers and fewer than one quarter of current spit tobacco users reported being advised by a health care provider to quit using tobacco products.
- Among those advised to quit smoking, only half received recommendations or prescriptions for Nicotine Replacement Therapy or prescription quitting medications.
- Few received recommendations to use behavioral support such as classes, counseling, or self help materials.
- Among those advised to quit using chewing tobacco, only 22% received recommendations or prescriptions for NRT.

**Participants who quit or tried to quit smoking underutilized all forms of quitting assistance.**

- One fifth or fewer of all participants who successfully quit smoking and those who tried unsuccessfully to quit smoking reported using any form of assistance to quit.

### **Participants were aware of the dangers of second hand smoke.**

- More than 90% of participants believed that second hand smoke was harmful or very harmful.
- Most participants correctly identified second hand smoke as a risk factor for lung cancer and heart disease in adults and respiratory problems in children.
- Only half of participants correctly identified second hand smoke as a risk factor for Sudden Infant Death Syndrome (SIDS). Mortality from SIDS is more than twice as high among American Indians infants than white infants in the US as a whole,<sup>3</sup> so this is a high priority public health education topic.

### **Participants expressed strong support for Clean Indoor Air policies.**

- More than two thirds of participants believed that smoking should not be allowed at all in restaurants and other indoor public places such as bowling alleys, community centers, laundromats, shopping malls, and theaters.
- 85% said that smoking should not be allowed in workplaces.
- More than 80% reported that their workplaces had complete prohibitions on smoking in common areas and work areas.

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<sup>3</sup> Mathews TJ, MaDorman MR. 2006. Infant mortality statistics from the 2003 period linked birth/infant death data set. Natl Vital Stat Rep 54:1-29.

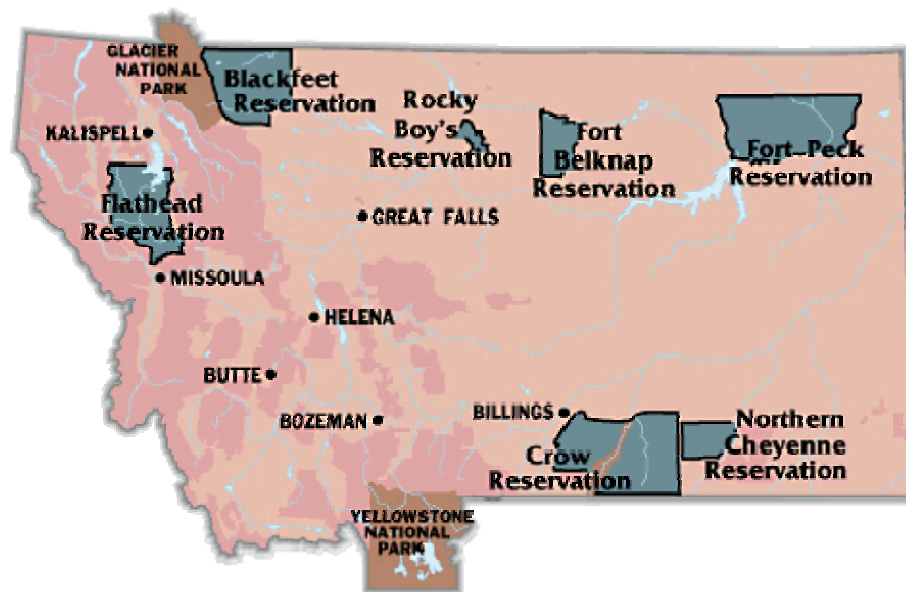
# **The Montana American Indian Behavioral risk Factor Surveillance System Survey Results About Commercial Tobacco 2001, 2003, and 2005**

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## Introduction

In 2001, 2003, and 2005, the Montana Department of Public Health and Human Services (DPHHS), in collaboration with the Billings Area Indian Health Service, conducted anonymous telephone surveys of American Indians age 18 and older living on or near the seven Reservations in the state. The survey was modeled on the Behavioral Risk Factor Surveillance System survey that Montana conducts annually in collaboration with the federal Centers for Disease Control and Prevention. The survey included a number of questions about commercial tobacco use and attitudes toward tobacco.



One thousand participants were interviewed each year. The samples represent 10% of the American Indian households on or near Reservations in Montana. Interviews were allocated to Reservations in proportion to their American Indian population. The samples did not include American Indians who resided far from Reservations or in urban areas.

Lists of three-digit prefixes for telephone numbers located on or near Reservations were obtained and a random-digit-dialing process was used to fill in the remaining digits. When a phone was answered, the interviewer identified himself or herself as conducting a survey on behalf of Montana DPHHS and asked how many adult American Indians lived in the household. A computer-assisted telephone interviewing software randomly selected one of those adults to be interviewed.

A phone number was called up to 15 times or until

- the number was never answered, answered only by a machine, or persistently busy,
- the number was determined not to be a private residence,

- there were no eligible respondents at the residence (American Indian age 18 or older),
- the selected eligible respondent was not available,
- the selected eligible respondent was physically or mentally unable to complete the interview,
- there was a language barrier to conducting the interview,
- the selected eligible respondent gave a firm refusal,
- an interview was completed.

The participation rates for the surveys were high: 85% of eligible individuals contacted in 2001 agreed to participate, 82% in 2003, and 75% in 2005.

### Telephone coverage

According to the 2000 Census, only 3% of households in Montana did not have telephone service. The Census does not ask respondents to distinguish between landline and cellular telephones, nor between individual or shared landlines in multiple-family dwellings: "Is there telephone service available in this house, apartment, or mobile home from which you can both make and receive calls?"<sup>1</sup> Cell phones and shared landlines in a multifamily dwelling were not included in these surveys. The proportion of households without telephones on Reservations in Montana ranges from 11% to 53%, depending on the Reservation.<sup>2</sup> The situation may be even more complicated because the proportion of non-American Indian residents also varies substantially by Reservation, from a 3% to 74%, and we do not know whether landline telephone service in households varies by race on the Reservations.<sup>2</sup> It is likely that households without telephone service differ from households with telephone service.

There were no statistically significant differences by year in the sociodemographic characteristics of participants or in the prevalence of tobacco use. The three survey years have been combined in analysis of questions that were asked in all three years. In some cases, questions asked in two years were combined, in other cases, questions asked in 2001 and 2005 were analyzed separately to check for temporal trends.

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<sup>1</sup> <http://www.census.gov/dmd/www/2000quest.html>

<sup>2</sup> [http://www.ceic.commerce.state.mt.us/Demog\\_Profiles.asp](http://www.ceic.commerce.state.mt.us/Demog_Profiles.asp)

## Characteristics of the Sample

Compared to American Indians in the 2000 Census for Montana,<sup>2</sup> participants in the American Indian BRFSS survey were more likely to be women, were somewhat older, had more education, and were more likely to be employed than all American Indians in the state, but had lower incomes.

% Distribution		
	Survey Participants	All American Indians in Montana 2000 Census
Sex		
Men	41	50
Women	59	50
Age		
18-24	11	19
25-34	15	21
35-44	22	24
45-54	22	18
55-64	17	10
65+	14	8
Education		
High school or less	47	77
More than high school	53	23
Household Income		
Below state median <sup>3</sup>	79	69
Above state median	21	31
Employment		
Employed	57	47
Unemployed	10	12
Not in workforce	33	41

## Categories Created for Analysis

Participants were asked their age in years, their educational attainment in six categories from less than elementary school through college graduate or more, and their annual household income in \$10,000 increments. We divided age into 10-year categories using groupings common to the census and many other investigations. This

<sup>2</sup> [http://www.ceic.commerce.state.mt.us/Demog\\_Profiles.asp](http://www.ceic.commerce.state.mt.us/Demog_Profiles.asp)

<sup>3</sup> [http://www.ceic.mt.gov/econ\\_business.asp](http://www.ceic.mt.gov/econ_business.asp)



resulted in a minimum of 300 people in the smallest age group (18-24 year olds) and 400 or more people in the other age groups. These groups are large enough to support reliable statistical analysis.

Only 17% of the sample had not graduated from high school or earned a GED and only 19% had graduated from college; 30% had a high school diploma or GED and 34% had some post-high-school education. Dividing the sample into those who had a high school degree or less and those who had some education beyond high school resulted in two large groups of approximately equal size.

We divided the sample into those below the state median income (approximately \$35,000 per year) and those above the state median. Sixty eight percent of the sample was below the state median and 32% was above. Although this did not result in groups of equal size, the smaller group included 825 participants and was therefore large enough for detailed statistical analysis.

**Results of the  
Montana American Indian  
Behavioral Risk Factor Surveillance System  
2001, 2003, 2005  
Questions About Commercial Tobacco**

## Section I: Prevalence of Cigarette Smoking

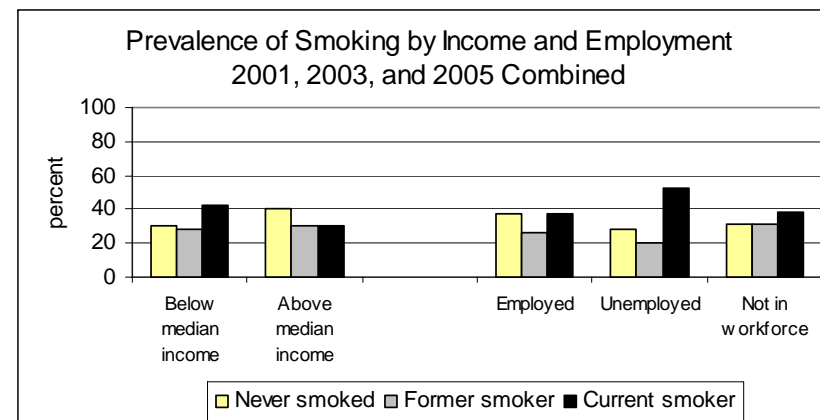
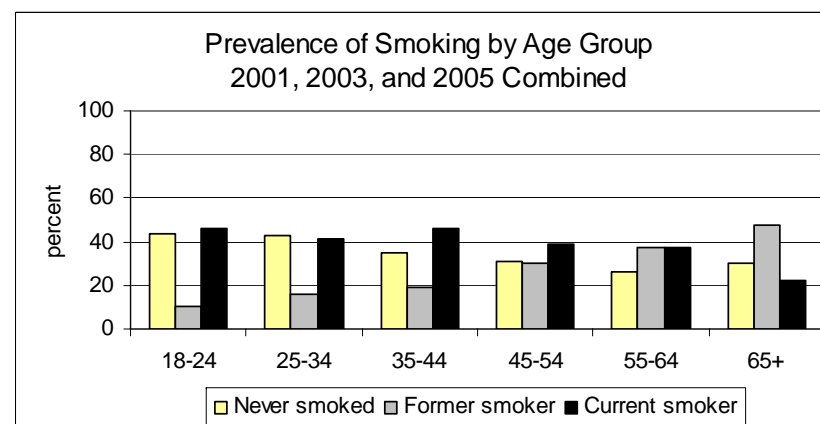
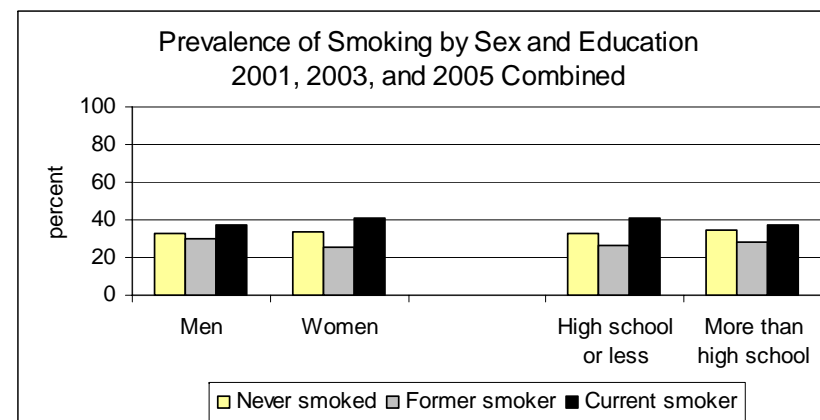
Overall, 39% of participants were current smokers. More women (41%) than men (37%) were current smokers ( $p < .01$ ), although more men (30%) than women (25%) were former smokers ( $p < .01$ ). Similar proportions of men and women reported that they had never smoked (33% and 34%, respectively).

Smoking status did not vary significantly by education in this sample.

More younger participants (ages 18-25, 25-34, and 35-44 years) were smokers while more older participants (45-54, 55-64, and 65 and older) were former smokers ( $p < .0001$ ). The proportion of participants who reported never smoking was highest among 18-24 year olds and 25-34 year olds.

More lower-income participants (42%) than higher-income participants (30%) were current smokers ( $p < .0001$ ). Similar proportions of lower-income and higher-income participants were former smokers (28% and 30%, respectively). More higher-income participants (40%) than lower-income participants (30%) reported that they had never smoked ( $p < .0001$ ).

More unemployed participants (53%) than employed participants (37%) or participants not in the workforce (38%) were current smokers ( $p < .0001$ ). Fewer unemployed participants (20%) than employed participants (26%) or those not in the workforce (31%) were former smokers ( $p < .0001$ ). More employed participants (37%) than unemployed participants (28%) or those not in the workforce (31%) reported that they had never smoked.



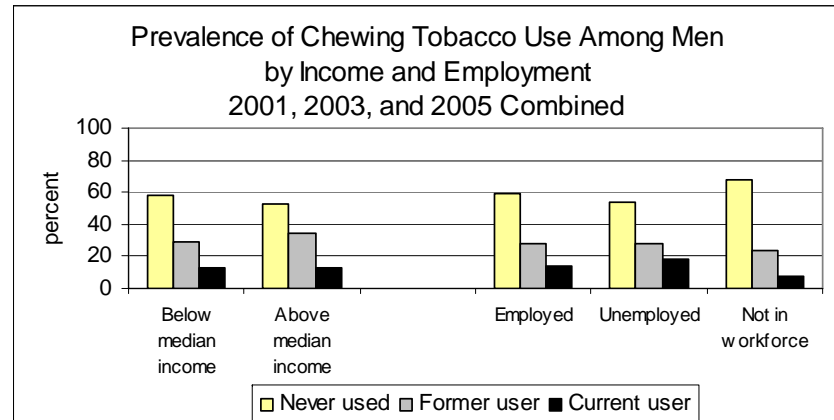
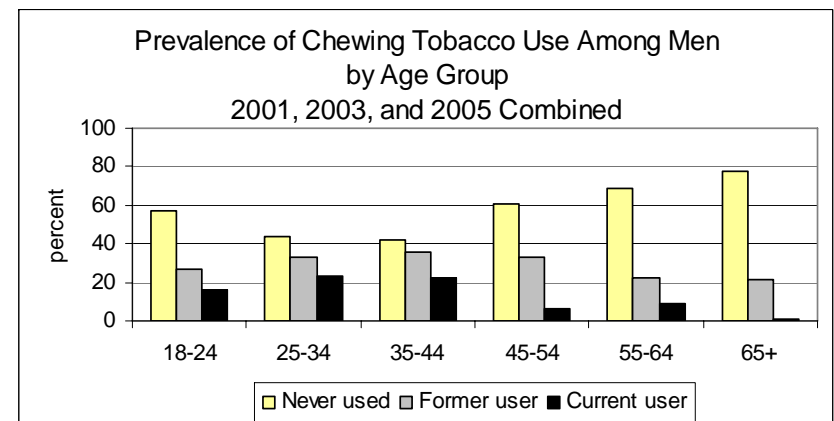
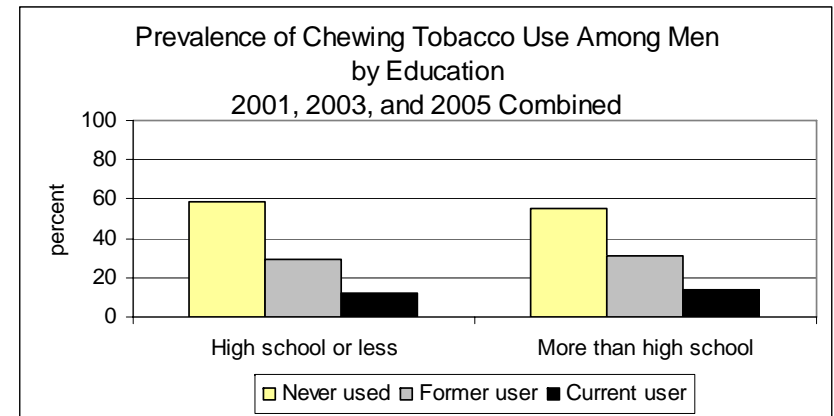
## Section II: Prevalence of Chewing Tobacco Use

Very few women in the sample reported using chewing tobacco (<2%) or ever having tried chewing tobacco (<10%) (data not shown). In contrast, 30% of men were former chewing tobacco users and 13% were current users (data not shown).

Among men, chewing tobacco use was uncommon among those age 45-54 (6%) and 55-64 (9%), and rare among those age 65 and older (1%). Chewing tobacco use was more common among those age 18-24 (16%), 25-34 (23%) and 35-44 (22%) ( $p < .0001$ ).

Chewing tobacco use among men did not vary by education or income.

Among men, fewer participants not in the workforce used chewing tobacco (8%) than those who were employed (14%) or those who were unemployed (18%) ( $p < .0001$ ). The effect of the employment status "not in the workforce" is largely accounted for by age, since many older men described themselves as retired.



### Section III: Efforts and Intentions to Quit Smoking

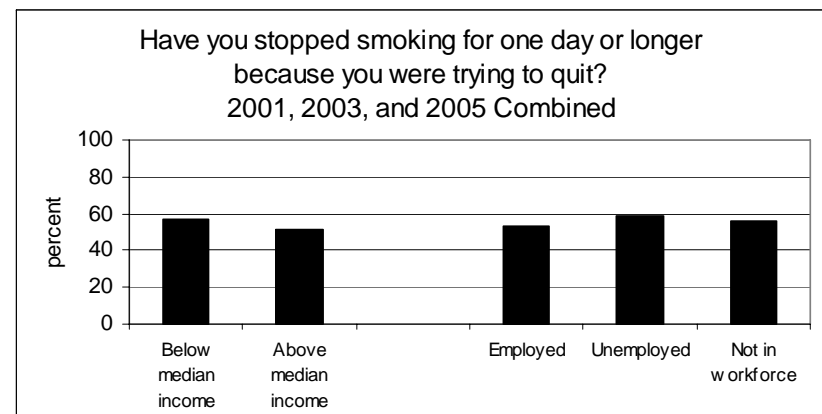
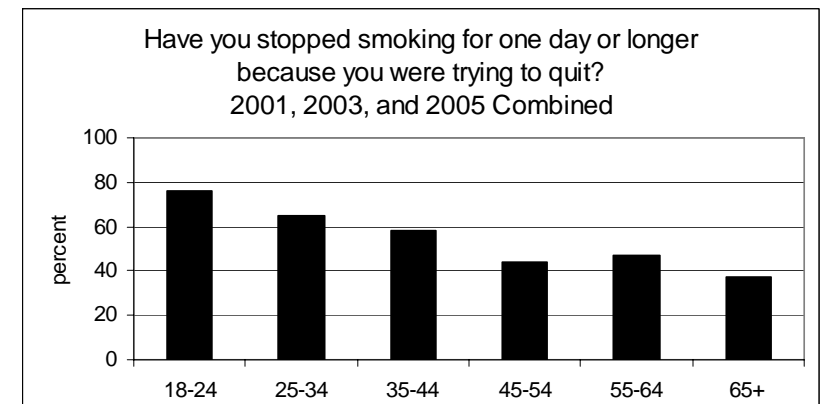
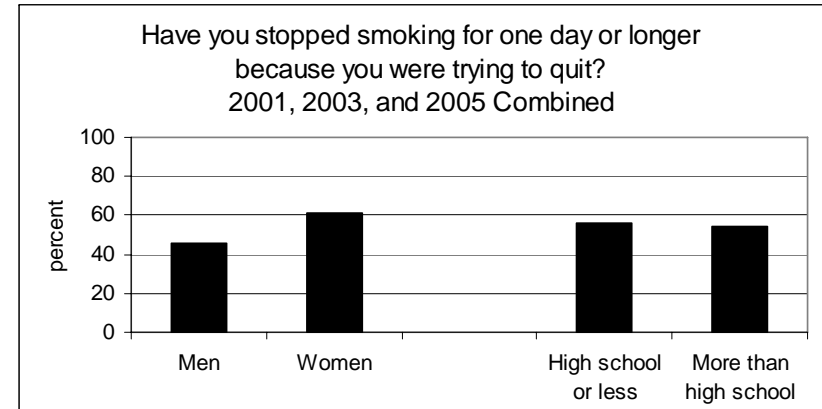
More than half of all current smokers (55%) reported that they had stopped smoking for a day or longer in the past year because they were trying to quit.

More women (61%) than men (46%) had tried to quit in the past year ( $p < .0001$ ).

Efforts to quit smoking did not vary by education in this sample.

More younger smokers than older smokers reported trying to quit in the past year ( $p < .0001$ ) and there was a trend of declining efforts to quit with increasing age.

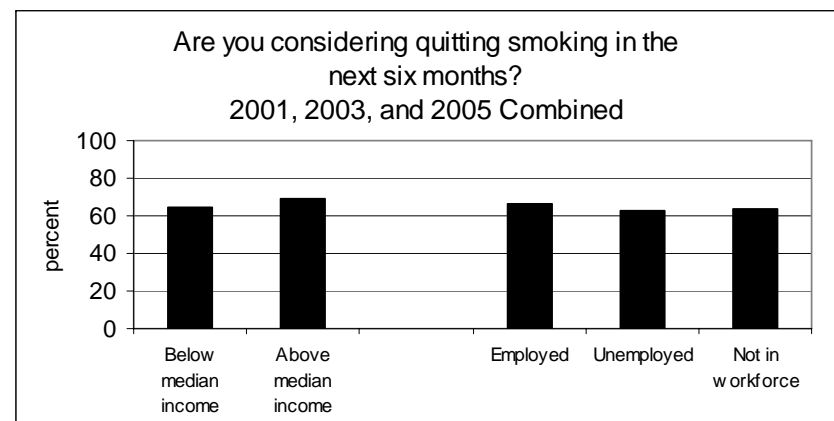
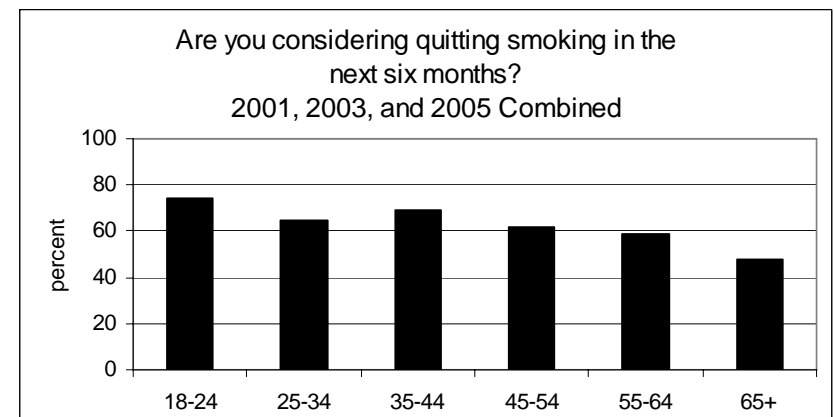
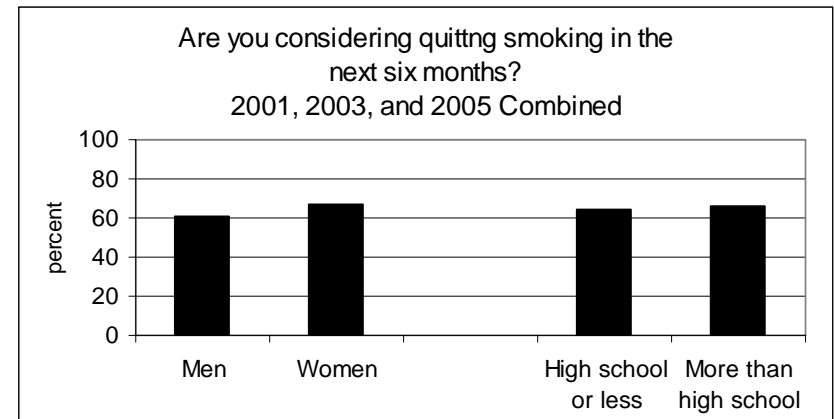
There was no difference in the proportion of participants who tried to quit smoking by income or employment status.



Two thirds of all current smokers (65%) reported that they were seriously considering quitting smoking in the next six months.

More current smokers age 18-24 were considering quitting (74%) than older smokers, and there was a trend for decreasing intention to quit with increasing age ( $< .05$ ).

There were no differences by sex, education, income, or employment status in the intention to quit smoking in the next six months.

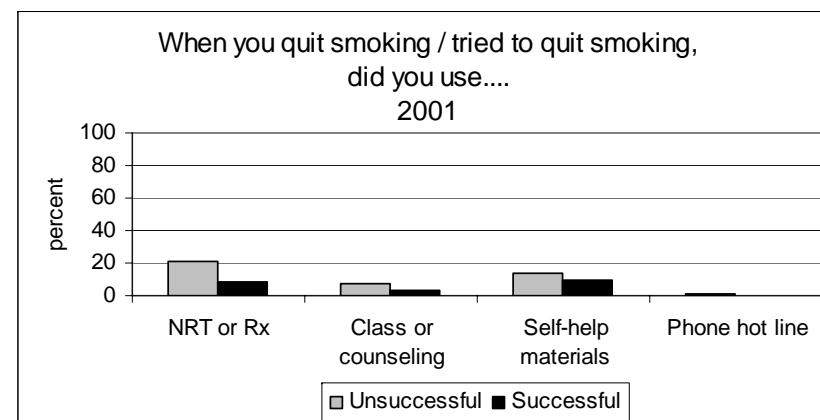
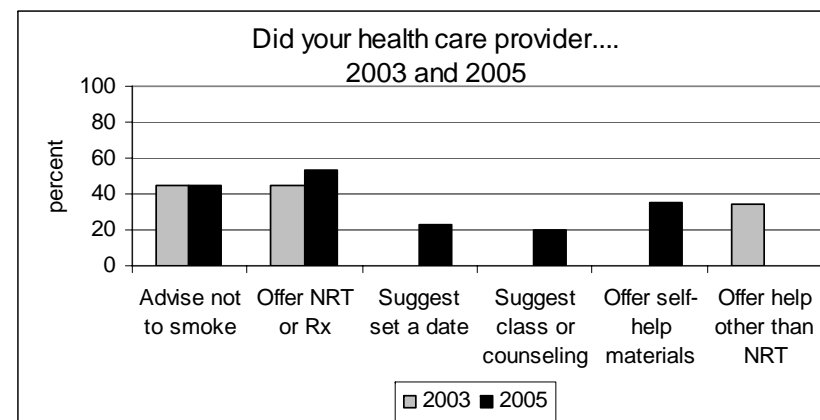


In 2003 and 2005, smokers were asked if a health care provider had advised them to quit smoking. Only 45% in each year reported that they had been advised by a health care provider to quit.

In 2003 and 2005, participants were asked if the health care provider who advised them to stop smoking also recommended nicotine replacement therapy (NRT) or prescription medications. Forty five percent reported being offered NRT or prescriptions in 2003 and 53% reported being offered this assistance in 2005.

In 2005, participants were also asked if the health care provider who advised them to stop smoking also suggested setting a date to stop smoking, suggested using a class or counseling, or offered booklets, videos, or other self-help materials. Twenty three percent reported a recommendation to set a date, 20% reported a recommendation for classes or counseling, and 35% reported receiving self-help materials. In 2003, participants were asked in the health care provider suggested any quitting aids other than NRT or prescriptions. Thirty four percent reported that the health care provider suggested other quitting aids.

In 2001, participants were asked if they had used NRT or prescriptions, counseling, self-help materials, or a toll-free telephone hot line in their successful or most recent unsuccessful attempt to quit. The proportion of participants who used each form of quitting assistance was small. NRT or other prescription aids were the most common, but used in only 21% of unsuccessful attempts and 8% of successful attempts. Self-help materials were the most common form of assistance used by successful quitters (10%).



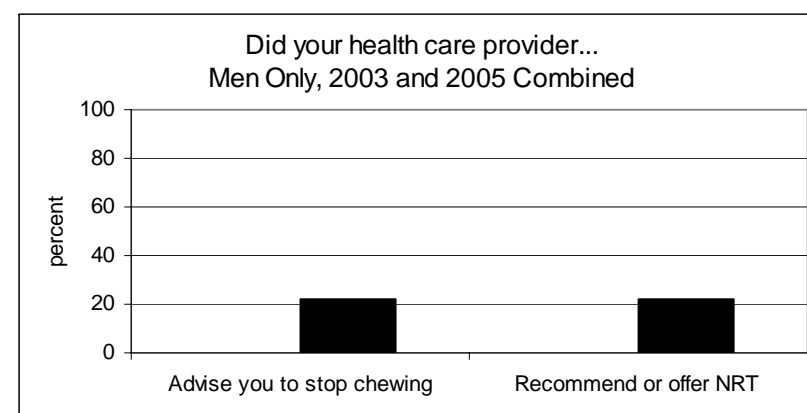
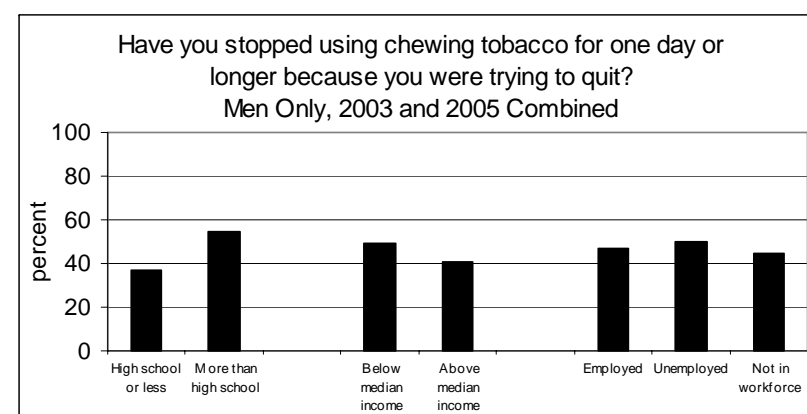
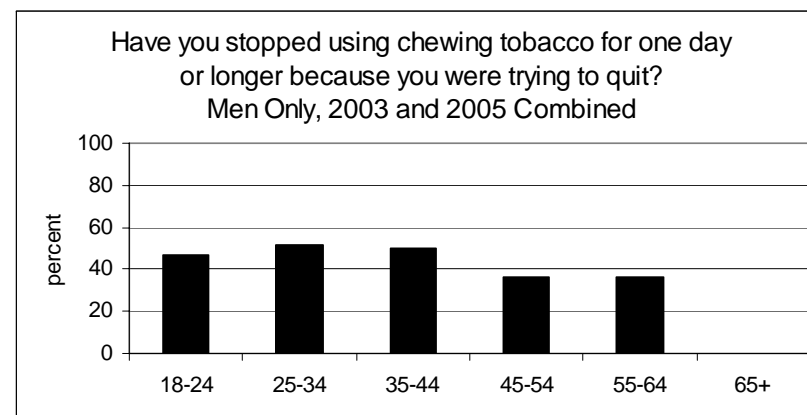
#### Section IV: Efforts and Intentions to Quit Using Chewing Tobacco Among Men

Overall, 47% of men who currently used chewing tobacco reported that they had stopped for one day or longer in the year before the survey because they were trying to quit.

Efforts to quit using chewing tobacco were not statistically significantly different by age group, income, or employment status in this sample.

More men with more than a high school education than those with a high school education or less reported trying to quit in the past year ( $p < .05$ ).

Only 22% of current chewing tobacco users reported that a health care provider had advised them not to use chewing tobacco, and only 22% reported being offered Nicotine Replacement Therapy (NRT) or a prescription quitting aid.

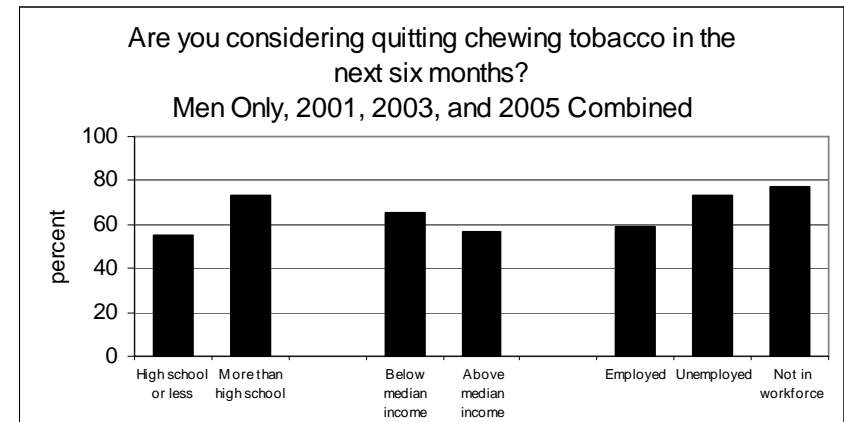
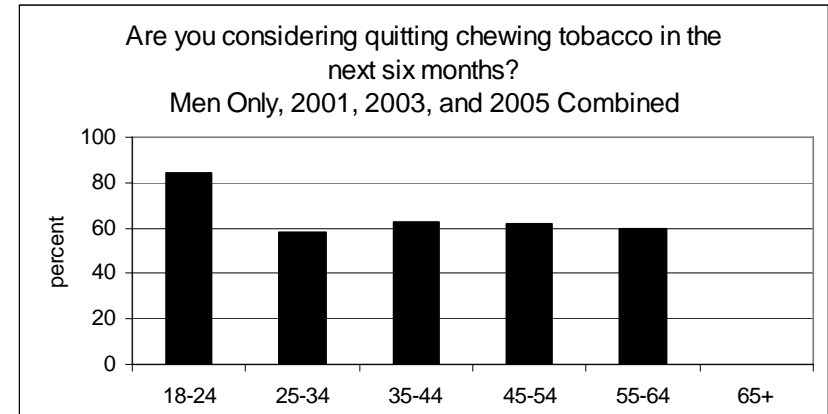




In spite of lack of health care provider encouragement to quit, 64% of men who used chewing tobacco reported that they were considering quitting in the next six months.

Intentions to quit using chewing tobacco did not differ by age group, income, or employment status in this sample.

More men with more than a high school education than those with a high school education or less reported considering quitting in the next six months ( $p < .05$ ).

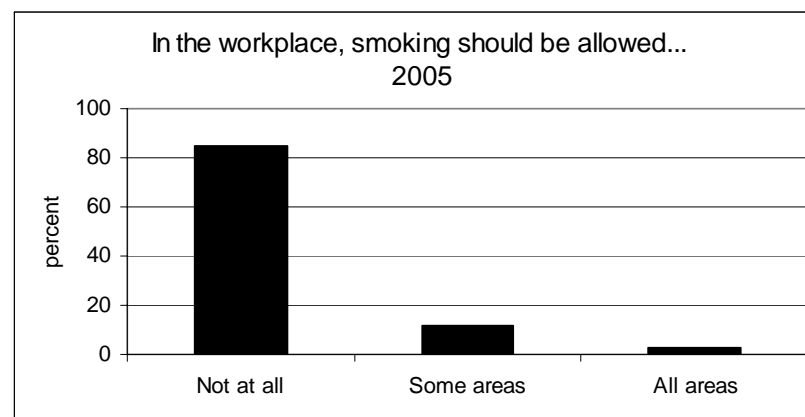
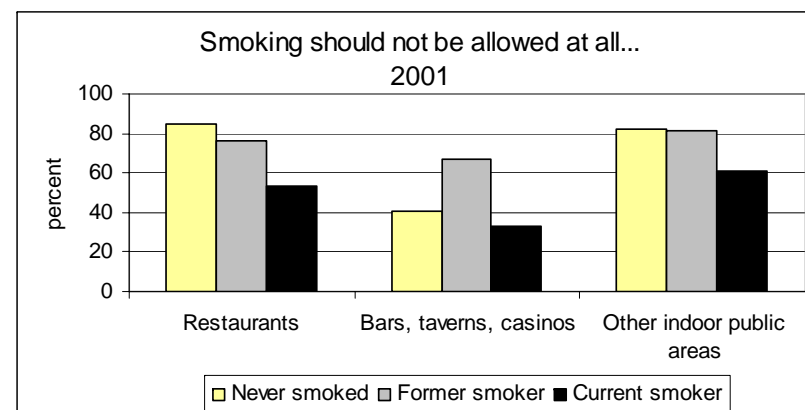
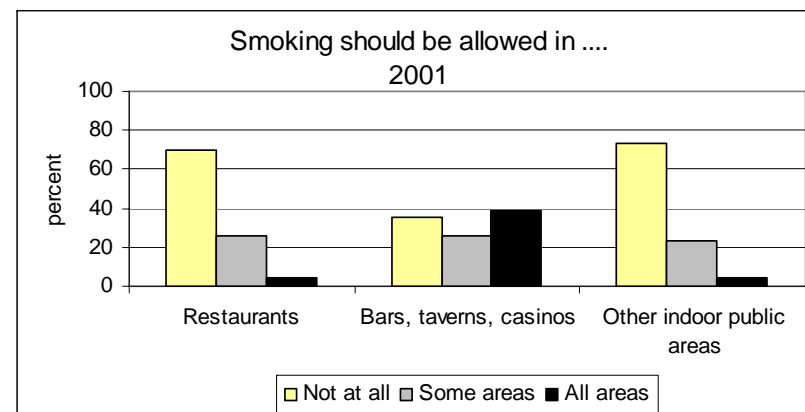


## Section V: Public Smoking Policies

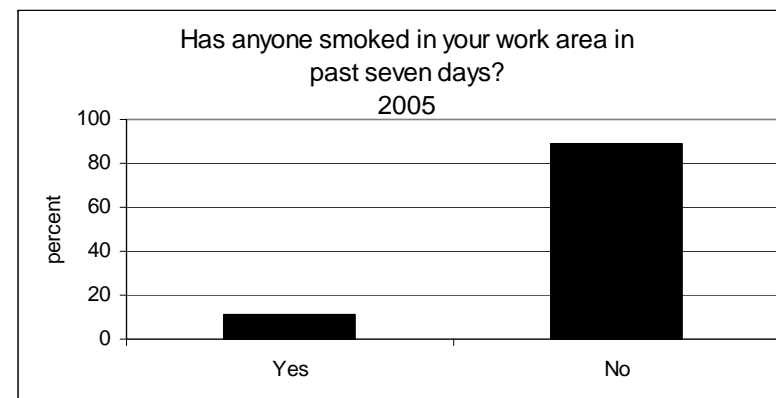
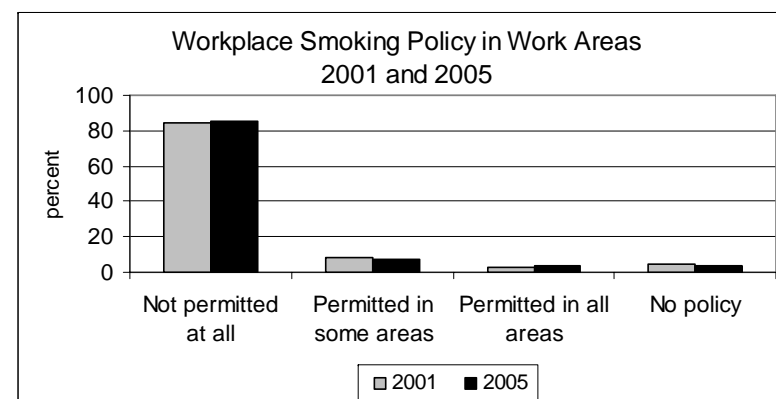
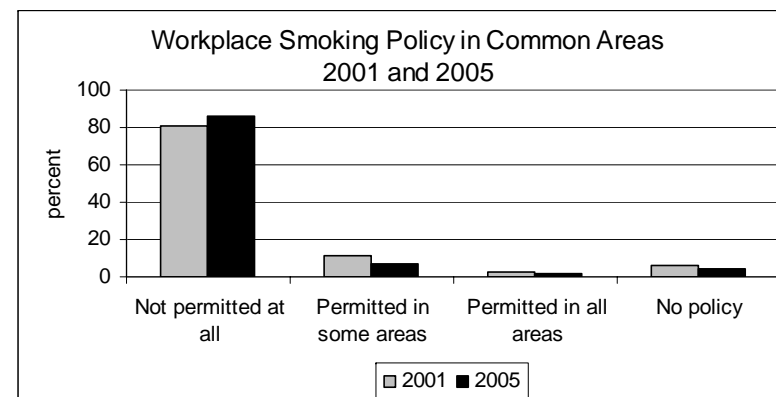
In 2001, participants were asked if they believed smoking should be allowed in all areas, some areas, or should not be allowed at all in restaurants, bars, taverns and casinos, and other indoor public places. Seventy percent said smoking should not be allowed at all in restaurants and 73% said smoking should not be allowed at all in other indoor public places. However, only 35% said smoking should not be allowed at all in bars, taverns, and casinos.

Eighty five percent of those who had never smoked said smoking should not be allowed at all in restaurants and 82% said smoking should not be allowed at all in other indoor places, but only 41% said smoking should not be allowed at all in bars, taverns, or casinos. Former smokers said smoking should not be allowed at all in restaurants (76%), bars, taverns and casinos (67%), and other indoor places (81%). Fewer smokers said smoking should not be allowed at all in restaurants (53%), bars, taverns, and casinos (33%), and other indoor places (61%). Differences by smoking status were statistically significant at  $p < .0001$ .

In 2005, participants were asked if they believed smoking should be allowed in all areas, some areas, or not at all in indoor work places. Eight five percent said smoking should not be allowed at all in workplaces.



In 2001 and 2005, participants who were employed and worked indoors most of the time were asked about workplace smoking policies for common areas and work areas. In 2001, 81% reported that smoking was not permitted at all in common areas and 84% reported that smoking was not permitted at all in work areas; this increased slightly in 2005. The 2005 survey was conducted between September 16 and November 11, spanning the implementation of the Montana Clean Indoor Air Act which went into effect on October 1.



In 2005, participants were asked if, as far as they knew, someone had smoked in their work area in the week before the survey. Only 11% reported that they were aware of someone smoking in their work area.

## Section VI: Rules About Smoking in the Home

In 2001, participants were asked about rules about smoking in their homes. Fifty nine percent reported that smoking was not permitted at any time or any place in their homes, 16% reported that smoking was permitted at some times or some places, and 25% reported no restrictions (data not shown).

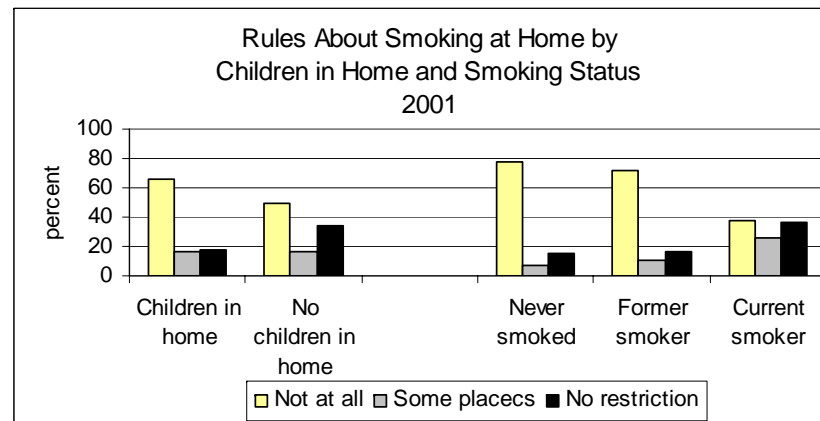
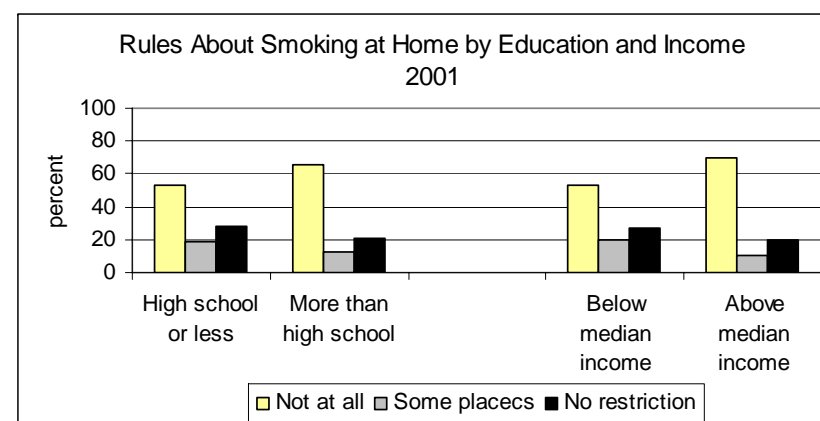
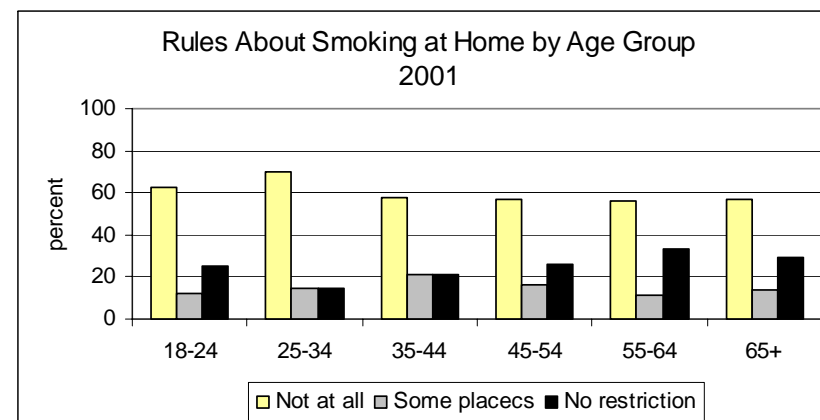
More participants age 25-34 (70%) than other age groups did not permit smoking in their homes ( $p < .01$ ). Most of these participants also reported having children in their homes.

More participants with post-high school education (66%) than those with less education (53%) reported rules banning smoking in their homes ( $p < .0001$ ).

More participants with incomes above the state median (70%) than those with incomes below the median (53%) reported rules banning smoking in their homes ( $p < .0001$ ).

More participants who had children under age 18 living in their households (66%) than those without children living in their households (50%) reported rules banning smoking in their homes ( $p < .0001$ ).

More participants who had never smoked (78%) or who were former smokers (72%) than current smokers (38%) reported rules banning smoking in their homes ( $p < .0001$ ).

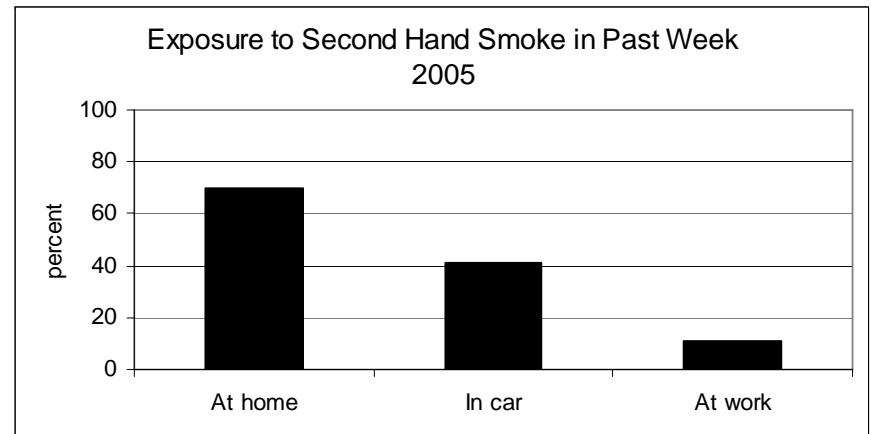
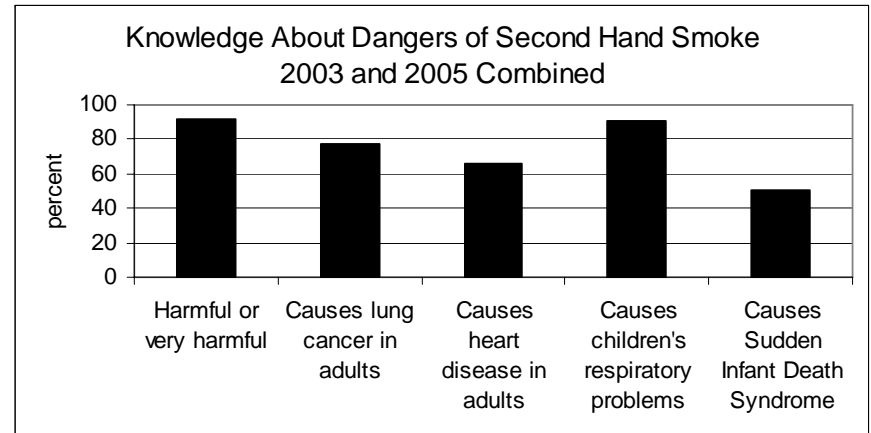


## Section VII: Second Hand Smoke

In 2003 and 2005, participants were asked if they believed second hand smoke was very harmful, somewhat harmful, not very harmful, or not harmful at all to one's health. Ninety two percent said second hand smoke was harmful or very harmful.

Most participants also knew that second hand smoke causes lung cancer in adults (77%), heart disease in adults (66%), respiratory problems in children (91%), and Sudden Infant Death Syndrome (51%), although a substantial proportion replied "Don't Know" to these questions (14%, 21%, 5%, and 36%, respectively).

In 2005, participants were asked if anyone had smoked cigarettes, cigars, or pipes inside their home in the week before the survey, and if they had been in the car with someone who was smoking in the week before the survey. Seventy percent had been exposed to second hand smoke at home and 41% had been exposed in a car in the past week. In addition, 11% reported being exposed to second hand smoke at work in the week before the survey. The 2005 survey was conducted between May and November, spanning the implementation of the Montana Clean Indoor Air Act on October 1.



## **Appendix 1**

### **Data Tables**

Please see separate Excel spreadsheet file for data tables.

## **Appendix 2**

### **Questionnaires**

The American Indian BRFSS Survey is a comprehensive survey of many health behaviors and risk factors that contribute to chronic disease burden. The questions listed in this Appendix pertain specifically to commercial tobacco use and demographic variables included in this report.

Have you smoked at least 100 cigarettes in your entire life? [2001, 2003, 2005]

Do you now smoke cigarettes every day, some days, or not at all? [2001, 2003, 2005]

During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit? [2001, 2003, 2005]

[When you tried to quit smoking.....]

Did you use any medicines [to help you quit smoking] such as nicotine gum, patches, or pills such as Zyban? [2001]

Did you use counseling advice [to help you quit smoking]? [2001]

Did you use self-help materials [to help you quit smoking]? [2001]

Did you call a smoking cessation hotline, help line, or quit line? [2001]

Would you like to quit smoking? [2001]

Are you seriously considering stopping [smoking] within the next six months? [2001, 2003, 2005]

Are you planning to stop [smoking] within the next 30 days? [2001]

In the past 12 months, has a doctor, nurse, or other health care professional advised you to quit smoking? [2001, 2003, 2005]

In the past 12 months, when a doctor, nurse, or other health professional advised you to quit smoking, did they also do any of the following:

- Discuss or prescribe medication such as a nicotine patch, gum, nasal spray, inhaler, or lozenges, or pills such as Zyban or Welbutrin? [2003]
- Discuss methods and strategies other than medication to assist you with quitting smoking? [2003]
- Prescribe or recommend a patch, nicotine gum, nicotine lozenges, nasal spray, an inhaler, or pills such as Zyban? [2005]
- Suggest that you set a specific date to stop smoking [2005]
- Suggest that you use a smoking cessation class, program, quit line, or counseling [2005]
- Provide you with booklets, videos, or other materials to help you quit smoking on your own? [2005]

[When you quit smoking.....]

Did you use any medicines to help you stop smoking, such as nicotine gum, patches, or pills such as Zyban? [2001]



Did you use counseling advice to stop smoking? [2001]

Did you use any self-help materials to stop smoking? [2001]

Did you call a smoking cessation hot line, help line, or quit line to stop smoking? [2001]

Have you ever used or tried any smokeless tobacco products such as chewing tobacco or snuff? [2001, 2003, 2005]

Do you currently use any smokeless tobacco products such as chewing tobacco or snuff? [2001, 2003, 2005]

Would you like to quit chewing tobacco or using snuff? [2001]

During the past 12 months, have you stopped using chewing tobacco or snuff for one day or longer because you were trying to quit? [2003, 2005]

Are you seriously considering stopping [using chewing tobacco or snuff] within the next 6 months? [2001, 2003, 2005]

Are you planning to stop [using chewing tobacco or snuff] within the next 30 days? [2001]

In the past 12 months, has a doctor, nurse, or other health care professional advised you to quit chewing tobacco or using snuff? [2001, 2003, 2005]

In the past 12 months, when a doctor, nurse, or other health professional advised you to quit using chewing tobacco or snuff, did they also do any of the following:

- Discuss or prescribe medication such as nicotine patch, gum, nasal spray, inhaler, or lozenge, or pills such as Zyban or Welbutrin? [2003]
- Discuss methods and strategies other than medication to assist you with quitting chewing tobacco or snuff? [2003]
- Prescribe or recommend a patch, nicotine gum, nicotine lozenges, nasal spray, and inhaler, or pills such as Zyban? [2005]
- Suggest that you set a specific date to stop using chewing tobacco or snuff? [2005]
- Suggest that you use a cessation class, program quit line, or counseling to stop using chewing tobacco or snuff? [2005]
- Provide you with booklets, videos, or other materials to help you stop using chewing tobacco or snuff on your own? [2005]

In the past 12 months have you used any medicines such as nicotine gum, patches or pills such as Zyban to help you quit chewing tobacco or using snuff? [2001]

Do you think that breathing smoke from other people's cigarettes is... [2003, 2005]  
Very harmful to one's health

Somewhat harmful to ones health  
Not very harmful to one's health  
Not harmful at all to one's health

Would you say that breathing smoke from other people's cigarettes causes... [2005]

Lung cancer in adults  
Heart disease in adults  
Respiratory problems in children  
Sudden Infant Death Syndrome

During the past seven days, on how many days did anyone smoke cigarettes, cigars, or pipes anywhere inside your home? [2005]

During the past seven days, have you been in a car with someone who was smoking? [2005]

Which of the following best describe your place of works official smoking policy for indoor public or common areas such as lobbies, rest rooms, and lunch rooms? [2001, 2005]

Not allowed in any public areas  
Allowed in some public areas  
Allowed in all public areas  
No official policies

Which of the following best describes your place of works official smoking policy for work areas? [2001, 2005]

Not allowed in any work areas  
Allowed in some work areas  
Allowed in all work areas  
No official policy

As far as you know, in the past seven days, has anyone smoked in your work area? [2005]

In indoor work areas, do you think smoking should be allowed in all areas, some areas, or not at all? [2005]

In the following locations, do you think that smoking should be allowed in all areas, some areas, or not allowed at all? [2001]

Restaurants  
Bars, taverns, casinos  
Other indoor public places such as bowling alleys, community centers, laundromats, shopping malls, theatres, and so forth

Which statement best describes the rules about smoking inside you home? [2001]

Smoking is not allowed anywhere inside your home

Smoking is allowed in some places or at some times  
Smoking is allowed anywhere inside the home  
There are no rules about smoking inside the home

What is your age? [2001, 2003, 2005]

Are you currently  
employed for wages  
self employed  
out of work  
home maker  
student  
retired  
unable to work [2001, 2003, 2005]

What is the highest grade or year of school you completed? [2001, 2003, 2005]

What is your household income from all sources? [2001, 2003, 2005]

How many children less than 18 live in you household? [2001, 2003, 2005]

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